

Emergency Agricultural Livelihoods and Climate Resilience Project

Subcomponent B.1: Restoration of Key Infrastructure in Agriculture, Livestock, and Forestry

ENVIRONMENTAL AND SOCIAL SCREENING PROCESS

RESTORATION OF THE SALISBURY IRRIGATION SYSTEM

Photo #1.



Photo # 2.



Photo # 3.



Photo # 4



1. Purpose of the Screening Process

All sub projects related to the Emergency Agricultural Livelihood and Climate Resilient Project (EALCRP) must be reviewed and assessed to ensure that environmental and social impacts associated with their implementation throughout the project's life cycle are avoided, mitigated, or compensated. The Environmental and Social Screening process (ESS) is an initial safeguards instrument used to address the environmental and social impacts and risks of projects. This screening process will determine the need for a more detail studies or the development of an Environmental and Social Management Plan (ESMP).

2. Salisbury Irrigation System

The Salisbury irrigation system was established in 1985 and funded by the Canadian Government. During the passage of hurricane Maria, this system suffered severe damage to its piping and intake. Therefore, the Project intends to apply part of the proceeds toward payments under the contract for Restoration of the Salisbury Irrigation System. The irrigation system begins with the intake source at Fond Coco in the heights of Salisbury to its distribution point at Grande Savanne, Salisbury. The Rock Vegetables Producers Cooperative comprising of 15 members and are the primary beneficiaries of this irrigation project. All members are connected to the distribution lines of this irrigation system and will be responsible for the management and sustainable use of this scare resource. This subproject does not extend to repairs or replacement of pipes beyond the distribution point namely the old storage tank (not functional) (photo # 3 and 4) on Grand Savanne. The Rock Vegetable farmer group will continue to maintain the system as customary and will ration the water among themselves especially in the dry season or times of water shortages.

3. Description of Restoration Works

The existing system consist of galvanized and poly-blue pipes (photo # 1) and the services includes installations of pipework and water supply to farm lands in the Grand Savanne area, Salisbury. The works include the construction of a river crossing and the rehabilitation to an irrigation system. The system comprises of galvanized and poly-blue pipes and reinforced concrete (photo # 2.). The overall dimensions of the system that requires rehabilitation is 1,035 meters of pipe.

The equipment required to undertake this project include but is not limited to – concrete mixer, 6-ton dump truck, 4x4 pickup truck, wheel barrows, pipe wrenches, picks, crowbars, shovels, generators, concrete and pipe cutters.

The description of sections of the restoration works include:

- The excavation of a trench of 2.44 meters (m) in length across the existing parallel concrete wheel tracks will allow for placement of the 3” galvanized pipe. The concrete wheel track each of 0.62m will be removed by using a concrete cutter and then excavated to a depth of 1 meter. After excavation, roads will be repaired to pre-existing conditions as before.
- Removal of deteriorated/damaged sections of galvanized and/or poly-blue pipes and install new galvanized pipes to include valves, fittings, thrust blocks, reducers etc.
- Overall enhancement of the functions of the system;

- Cleaning and maintenance of the irrigation system will be the responsibility of the Rock Vegetables Farmers Group. The Rock vegetable farmers will also continue to maintain the system collaboratively during the operation of the irrigation system in the long-term.
- Excavation for pipe trenches where necessary at 0.31-meter-wide x 1 meter deep.

4. Stakeholder Engagement

A meeting was conducted by the West Agricultural Team and PIU Safeguards on September 7th 2022 with the Rock Vegetable Farmers Group including 15 farmers, beneficiaries of the irrigation system. The objectives of the meeting were to discuss the scope of works and safety and efficiency of the irrigation system. There were 20 participants including farmers and neighbours, who voiced a few concerns on the functionality of the old system with the expectation that the repairs would rectify those issues. Those issues include the irregular flow of water and low water pressure. Firstly, beneficiaries were informed that the scope of works for this sub-project does not provide for a storage tank and they would have to provide their own for storage. Secondly, it was noted that the storage of water would be within the system which is the entire length of pipe to the intake. Safety issue concerns about the use of irrigation water for drinking were address and Beneficiaries stated that they have been using this system for over 15 years without any risk of contamination or illness. However, as an extra safety measure it was decided to put up safety signage one for each Beneficiary indicating the intended use of the water (“Water Not for Drinking”).

	Participant`s Name	Gender	
		Male	Female
1	Francis Julien	✓	
2	Ursuline Julien		✓
3	Luke Louis	✓	
4	Euthincia Frederick		✓
5	Gilbert Frederick	✓	
6	Wilson Vidal	✓	
7	Charles Gardier	✓	
8	Emmanuel James		✓
9	Jodam Merrevs	✓	
10	Lenary John	✓	
11	Hesford Victor	✓	
12	Willford Cordrington	✓	
13	Olivia Vidal		✓
14	Matson Frederick	✓	
15	Richardson Edwards	✓	
16	Derrick Louis	✓	
17	Berlvin Gardier	✓	
8	Jo-Yane Williams		✓
19	Keston Williams	✓	
20	Shannah Joseph		✓
		14	6

5. Environmental and Social Screening Checklist

This Environmental and Social screening checklist identifies potential impacts of the Salisbury Irrigation System envisioned under Emergency Agricultural Livelihoods and Climate Resilience Project (EALCRP). Many of the actions or activities have low or negligible potential negative impacts, such as the replacement and disposal of faulty pipes, minor excavation not to exceed 1 meter deep and concrete works.

Section A: Background information

Subproject Name	Restoration of Key Infrastructure in Agriculture and Forestry
Subproject Purpose	<input type="checkbox"/> New Structure <input type="checkbox"/> Expansion of existing structure <input checked="" type="checkbox"/> Renovation of existing structure (replacement of faulty galvanised pipes) <input type="checkbox"/> Construction of waste disposal system
Subproject Location	Fond Coco (intake) to Grand Savanne (distribution point)
Subproject property ownership	<input checked="" type="checkbox"/> Government of the Commonwealth of Dominica <input type="checkbox"/> Own <input type="checkbox"/> Lease Agreement
Subproject current property use	<input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Agricultural (irrigation) <input type="checkbox"/> Residential
Subproject Component	Restoration of the Salisbury Irrigation System
Estimated Investment	
Start/Completion Date	November 2022 to March 2022

Section A: Irrigation Issues

Will the sub-project:	YES	NO
Cause flooding of agricultural lands.		X
Cause soil erosion or land slippage of large expanse of land.		X
Cause damage to access road		X
Affect waterways, streams or drains		X
Affect the free movement of traffic		X
Cause the displace of individuals, families or businesses?		X

Result in temporary or permanent loss of crops, fruit trees and Pasture land?		X
Allow for the creation of stagnant water and increasing the risk of water borne and water related disease		X
Affect fisheries and wildlife		X

Section B: Construction Issues

Will the sub-project:	Yes	No
Demolish existing structures and require disposal of construction materials? ?		X
Demolish existing structures and require disposal of hazardous materials?		X
Involve the generation of a significant amounts of solid and liquid waste?		X
Construction work generate emissions to the atmosphere (dust, odours, fumes)?	X	
Construction work cause a noise nuisance due to the operation of heavy machinery and other on-site activities?		X
Construction work produce significant amounts of runoff, change drainage patterns and/or erosion?		X
Construction work affect traffic or public safety?	X	
Cause physical changes in topography and land use?		X

If answers to any of the above is 'yes', please include an ESMP in sub-project implementation.

Section C: Environmental Issue

Will the sub-project	YES	NO
Create a risk of increased soil erosion?		X
Create a risk of increased deforestation?		X
Create a risk of increasing any other soil degradation?		X
Affect soil salinity and alkalinity?		X
Divert the water resource from its natural course/location?		X
Cause pollution of aquatic ecosystems by sedimentation and agro-chemicals, oil spillage, effluents, etc.?		X
Introduce exotic/alien plants or animals?		X
Involve drainage of wetlands or other permanently flooded areas?		X
Cause poor water drainage and increase the risk of water-related diseases such as Dengue?		X
Reduce the quantity of water for the downstream users?		X
Result in the lowering of groundwater level or depletion of groundwater?		X
Create waste that could adversely affect local soils, vegetation, rivers and streams or groundwater?		X
Reduce various types of livestock production?		X
Focus on biomass/bio-fuel energy generation?		X

If answers to any of the above is 'yes', please include an ESMP in sub-project implementation.

Section D: Socioeconomic Issues & Community Health and Safety

Will the sub-project:	YES	NO
Displace people from their current settlement?		X
Cause an influx of labour?		X
Interfere with the normal health and safety of the worker/community?	X	
Reduce the employment opportunities for the surrounding communities?		X
Reduce settlement (no further area allocated to settlements)?		X
Reduce income for the local communities?		X
Increase safety concerns due to introduction of the project?		X
Increase exposure of the community to communicable diseases such as HIV/AIDS?		X
Induce conflict?		X
Introduce new practices and habits?		X
Lead to child delinquency (school drop-outs, child abuse, child labour, etc.)?		X
Lead to gender disparity or gender-based violence?		X
Lead to poor diets?		X
Lead to social evils (drug abuse, excessive alcohol consumption, crime, etc.)?		X
Cause an increased exposure of the community to COVID-19?	X	

Section E: Natural Habitat

Will the sub-project:	YES	NO
Be located within environmentally sensitive areas (e.g., intact natural forests, mangroves, wetlands) or threatened species? NB: If the answer is yes, the sub-project should prepare a Natural Habitats Plan (see ESMP).		X
Adversely affect environmentally sensitive areas or critical habitats – wetlands, woodlots, natural forests, rivers, protected areas including national parks, reserves or local sanctuaries, etc.)? NB: If the answer is yes, the sub-project should not proceed.		X
Affect the indigenous biodiversity (flora and fauna)? NB: If the answer is yes, the sub-project should not proceed.		X
Cause any loss or degradation of any natural habitats, either directly (through project works) or indirectly? NB: If the answer is yes, the sub-project should not proceed.		X
Affect the aesthetic quality of the landscape?		X
Reduce people's access to the pasture, water, public services or other resources that they depend on?		X
Increase human-wildlife conflicts?		X
Use irrigation system in its implementation?		X

NB: If the answers to any of the above is 'yes', please include an ESMP/Natural Habitat Management Plan with sub-project application

Section F: Pesticides and Agriculture Chemicals

Will the sub-project:	YES	NO
Involve the use of pesticides or other agricultural chemicals, or increase existing use?		X
Cause contamination of watercourses by chemicals and pesticides?		X
Cause contamination of soil by agrochemicals and pesticides?		X
Experience effluent and/or emissions discharge?		X
Export produce? Involve annual inspections of the producers and unannounced inspections?		X
Require scheduled chemical applications?		X
Require chemical application even to areas distant away from the focus?		X
Require chemical application to be done by vulnerable group (pregnant mothers, chemically allergic persons, elderly, etc.)?		X

If the answer to the above is 'yes', please consult the IPMP that has been prepared for the project.

Section G: Vulnerable and Marginalized Groups meeting requirements for OP 4.10

Are there:	YES	NO
People who meet requirements for OP 4.10 living within the boundaries of, or near the project?		X
Members of these VMGs in the area who could benefit from the project?		X
VMGs livelihoods to be affected by the subproject?		X
Affect vulnerable people and underserved groups (e.g., children, elderly poor pensioners, physically challenged, women, particularly head of households or widows, etc.)?		X
Require temporary relocation for a vulnerable population affected (children, physically challenged, elderly, minority group etc.)?		X

If the answer to any of the above is 'yes', please consult the IPP that has been prepared for the project.

Section H: Land Acquisition and Access to Resources

Will the sub-project:	YES	NO
Require acquisition of land (public or private) (temporarily or Permanently) for its development?		X
Use land that is currently occupied or regularly used for productive purposes (e.g. gardening, farming, pasture, fishing locations, forests)?		X
Displace individuals, families or businesses?		X
Result in temporary or permanent loss of crops, fruit trees and Pasture land?		X
Adversely affect small communal cultural property such as funeral and burial sites, or sacred groves?		X
Result in involuntary restriction of access by people to legally		X

designated parks and protected areas?		
Be on monoculture cropping?		X

If the answer to any of the above is 'yes', please consult the mitigation measures in the ESMF, and if need be, adopt the ARAP guidelines.

Section J: Proposed action

Based on the above screening checklist results and the risk identified, the minor risk identified can be manage using mitigation measures available in the ESMF, to manage the potential impacts such as generation of small amounts of construction work dust and fumes, disposal of damaged pipes caused by minor manual excavation and increased exposure of workers to COVID-19 occupational health and safety hazards and risks, and the increase transmission of Contractor and Workers

Section K. Potential Risk and Impact of the Salisbury Irrigation

- Waste Management

All damaged galvanized pipes and fittings, removed must be disposed of at the landfill, as recommended by the Solid Waste Management Corporation (DSMC).

- Dust and fumes

During excavation the dust generated will be very minimal to negligible due to the high moisture content in the soil at the site of excavation. The risk of fumes and noise pollution generated by cement mixers and other motorized equipment will be low since most of the works will be done manually, using simple hand tools. Cutting through the concrete road or pipe will generate dust and noise, which will be mitigated using the appropriate protective gears.

- Community Health and Workers Safety

Rehabilitation works to the Salisbury irrigation system will not be done in the Community and as of such risk to the community is minimal. The risk of an increase in the spread and contraction of the Covid-19 virus will be mitigated by Contractors abiding to the local Covid-19 regulation.

- Traffic and Road Safety

Though the project site is not in the community and the traffic is not a frequent as on the main road, there may be times when vehicles maybe back-up due to excavation works. Road may also become slippery when contaminated with excavated soil.

Aspect	Potential Impacts	Proposed Mitigation
Excavation fumes, dust and noise pollution	<ul style="list-style-type: none"> ○ Respiratory ailments to site workers, ○ Noise and dust generation from the use of concrete cutting equipment 	<ul style="list-style-type: none"> ○ Construction workers should wear the appropriate PPEs such as dust masks or respirators when working. (according to approved procedures) ○ Wear Hearing protection when working around machinery where the noise exceeds 85 dB (sound from a lawn mower)

Aspect	Potential Impacts	Proposed Mitigation
		<ul style="list-style-type: none"> ○ Maintain tools, equipment and Contractors machinery according to maintenance requirements.
Health and Safety of workers	Injuries/accidents may occur during excavation	<ul style="list-style-type: none"> ○ Wear protective gears such as goggles, respirators and ear-plugs when cutting through concrete road or cutting pipes. ○ Perform excavation according to good industry practices ○ Signal and protect open excavated trenches with barrier ○ Whenever unattended, trenches should be covered.
Traffic	Causing traffic related accidents	<ul style="list-style-type: none"> ○ Wash off or remove soil from the concrete road immediately after excavation to avoid vehicle slipping off to the drain or causing accident. ○ Put traffic control signs such as “Men at Work”, “Slow Down”, “Open Trench Ahead” ○ Signal and protected the open trenches with barriers.
Community Health and Safety	Potential accidents	<ul style="list-style-type: none"> ○ Wash off or remove soil from the concrete road immediately after excavation to avoid causing accident. ○ Signal and protected the open trenches with barriers.
Waste Management	Creating land pollution and accidental toppling of pipes	<ul style="list-style-type: none"> ○ Dispose of old pipes in the landfill, as recommended by Solid Waste Management Corporation (DSWMC). ○ Ensure that pipes are securely fastened with straps and tie downs and completely covered.